

... WATER ...

A New "Fountain of Youth"?

The key to "the fountain of youth" is within the physical structure of water itself.

Indeed, we are what we drink.

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Albert Szent-Gyorgyi, the Nobel laureate who discovered vitamin C, calls water the mother and matrix of all life. Water is so much a part of life that we tend to ignore it and look elsewhere for the magic bullet, the secret herb or nutrient that will increase health and vigour and extend life-span.

Recent discoveries about the significance of water and its functions in the living system may forever change our view of water. All the symptoms of ageing are in one way or another accompanied by a slow dehydration of our vital tissues associated with free-radical oxidative damage. No matter how much tap water we drink, we cannot seem to slow down the inevitable starvation of vital tissues for the fluid that is everywhere. There is much more to tissue hydration than simply drinking ordinary water. Tissue water is as different from spring water as milk is from apple juice.

This is the story of a discovery that may help to slow down the dehydration and subsequent tissue damage that accompanies the ageing process.

The Beginning of the Quest

When Patrick Flanagan was 17 years old, he had already been a child prodigy in electronics and chemistry since the age of eight. He was consulting with a Stamford, Connecticut-based science 'think tank' when he first met Dr Henri Coanda (1885-1972).

Dr Coanda was 78 at the time and appeared to be in exceptionally good health. He had the quick mind and bright eyes of a man driven by a vast reservoir of inner energy. Dr Coanda is known as the "Father of Fluid Dynamics". In 1910, seven years after the first flights by the American inventors Orville and Wilbur Wright, Henri Coanda designed and built a jet-propelled monoplane which took off and flew under its own power with Coanda as pilot. He used an engine that he termed a reaction motor, but, discouraged by the lack of public acceptance of his aircraft, he abandoned his experiments and designed Bristol Fighter craft for the British in World War I.

While building the world's first jet airplane, Dr Coanda discovered an effect that has become known in the science of fluid dynamics as the "Coanda effect". Without the Coanda effect, we would not have a space shuttle or a 747 jet today.

During his 78th birthday party at the home of author-scientist G. Harry Stine, Patrick told Dr Coanda that he hoped that he (Patrick) was in the same excellent health when he was 78 years old. Coanda looked at Patrick and said, "Patrick, when you are 78 years old we'll talk about it." Everyone in earshot laughed at Coanda's joke.

A few days later, Dr Coanda invited Patrick into his office and told Patrick a secret that would change his entire life. He told Patrick that he had spent over 60 years searching for the secret to "the fountain of youth". He said that the human body is over 70 per cent water and that the brain is 90 per cent water. He said that water contains within its structure the secret to reversing the ageing process.

Dr Coanda had developed testing methods for determining different geometries in the structure of water. He travelled at length around the world and found five places that contained what he termed "anomalous water".

Two of these places included Hunza land in the Karakoram Mountains of Northern Pakistan, and the Vilcabamba in Ecuador. It has long fascinated anthropologists that people who live in these areas tend to age more slowly than the rest of us. In fact, people who live in these areas tend to remain healthy and disease-free well after the age of 100. There are documented cases of men fathering children after the age of 100.

Dr Coanda discovered that the secret of longevity in these areas was due to the special

physical properties of their water. The people who live in these areas also claim that water is the secret of their long, healthy lives. He found that this 'Hunza-type' was water significantly different from water found anywhere else.

Dr Coanda's lifelong ambition was to recreate Hunza water in his laboratory. Since the human body averages 70 per cent water, he was convinced that the secret of the Hunza people's abundance of healthy centenarians was due to the health-enhancing properties of their anomalous water.

As a result of his studies, he was able to test water anywhere on Earth and could predict the average age of death in any given locality just by testing the water in that area.

Although Dr Coanda was able to identify and catalogue these characteristics of Hunza water, he was unable to duplicate these special waters in his laboratory.

Dr Coanda originated the expression, "You are what you drink". He said that water affects our health more than any other nutrient. He told Patrick: "Discover the secret of Hunza-type water and you can extend life indefinitely."

It is interesting that Dr Alexis Carrel, another French scientist, had received the Nobel Prize in Medicine for keeping the cells of a chicken heart alive for 34 years. Dr Carrel said that "The cell is immortal.

It is merely the fluid (water) in which it floats that degenerates. Renew this fluid at intervals, give the cells what they require for nutrition and, as far as we know, the pulsation of life may go on forever."

Dr Coanda revealed the special characteristics of Hunza-type water to Patrick. With these clues in hand, Patrick started his own quest for the secret of Hunza water.

After obtaining a sample of Hunza water from Betty Lee Morales, a friend who had been to Hunza land many times, Patrick performed his own analysis. The first thing he discovered was that Hunza water is in many ways just like distilled water. It does not contain the mineral salts we find in mountain springs or in well-water. It is devoid of mineral salts.

The next thing Patrick found was that Hunza water contains trace minerals in a special colloidal form. Colloidal minerals are minerals that are insoluble in water. Colloidal minerals are not ionised into anions and cations like mineral salts. Although colloidal minerals are very common types of minerals, the colloids in

Hunza water are different from ordinary colloids.

Colloidal minerals are so tiny that they cannot be seen except with the most powerful microscopes. Instead of being ionised, they are suspended in water by a phenomenon known as "zeta potential".

Dr Thomas Riddick, a pioneer in colloid chemistry, stated: "Zeta potential represents a basic law of Nature, and it plays a vital role in all forms of plant and animal life. It is the force that maintains the discreteness of the billions of circulating cells which nourish the organism." If zeta potential is low, toxins cannot be suspended for elimination, and nutrients cannot be suspended for transportation to the cells. The whole system becomes clogged.

Patrick discovered that the colloid mineral clusters in Hunza water were smaller

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and had a higher zeta potential than other colloidal minerals. He also found that Hunza water contained a very large quantity of negatively ionised hydrogen atoms. Negatively ionised hydrogen atoms are not found in ordinary water.

All water contains hydrogen atoms with a positive charge. The hydrogen protons that are found in ordinary water control the pH or acid-alkaline balance. The negatively charged hydrogen protons found in Hunza water are the most powerful electron donors known to chemistry. These atoms are extremely powerful free-radical scavengers. These hydrogen ions are normally found only in the fluids of healthy living systems.

Colloidal Mineral Clusters

In 1983, Patrick met and married his wife, Gael Crystal. They travelled to the Great Pyramid of Giza in Egypt where they were married in a special ceremony inside the King's Chamber. Over the next three days, they stayed inside the Pyramid overnight and also spent the entire night on top of the Pyramid under the full moon.

After returning to their new home in the mountains outside of Sedona, Arizona, they built a new water research laboratory where they continued the quest for the secret of Hunza water.

As a result of one year of joint research, they finally succeeded in duplicating the anomalous properties of Hunza water. They created a new type of colloidal mineral cluster that is so small it is only 50 angstroms in diameter. These minerals are so small that 1,600 of them would fit side by side on a red blood cell.

These mineral clusters have since been trademarked under the name of Flanagan Microclusters®.

When these colloidal mineral clusters are added to ordinary distilled water, a number of extremely complex physical changes occur.

These changes include:

1) The high zeta potential attracts water molecules to the vicinity of the colloid where the water molecules are strongly polarised into forming hollow cages that resemble Buckminster Fuller's geodesic domes.

2) This ordering of molecules reduces the entropy of water. This means that the Gibbs free-energy increases. An increase in free energy in water means that the water can now support chemical reactions more easily and with less energy than before.

3) The surface tension or energy required to break the surface of water is greatly reduced. The phenomenon known as "wetting" is dependent on surface tension. The lower the surface tension, the wetter the water. This means that the water requires less energy to wet substances.

4) The colloidal mineral clusters can act as vast reservoirs of negatively ionised hydrogen atoms. (This final part of the Flanagan's discovery was made ten years after they were first able to duplicate the minerals found in Hunza water.)

Hunza-type waters have several things in common: they all come from high altitude mountain valleys, and the basic source of water is from ancient ice-blue glaciers. This means that the water is pure and mineral-free like distilled water, since glacier water is ancient rainwater. It has no mineral salts like the water found in springs and deep wells.

Lord Rutherford had discovered that proton nuclei could pick up electrons when they passed through matter. Since 87 per cent of cosmic rays are hydrogen protons, these high altitude glaciers may have trapped an enormous amount of hydrogen. As these cosmic rays passed through the

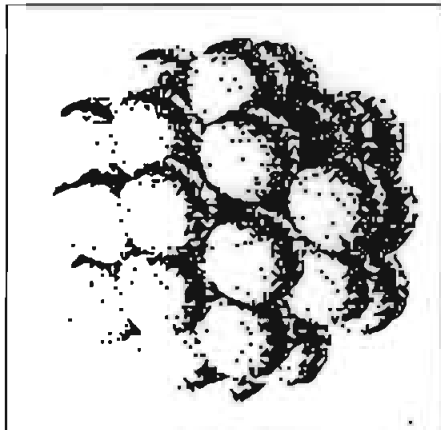
glacial ice, they may have gained electrons in the upper layers of the glacier. In addition, it is well known that hydrogen protons can travel through ice crystals thousands of times faster than any other type of ion.

Dr Castleman at the University of Pennsylvania has found that hydrogen can be trapped in cage-like water structures similar to geodesic domes. These geodesic dome-like cages were first predicted by two-time Nobel Prizewinner, Linus Pauling, in 1959 in his classic book, *The Hydrogen Bond*.

In addition, these waters contain a small quantity of high zeta-potential colloidal mineral clusters.

Patrick and Gael Crystal Flanagan discovered that Hunza water has special physical properties different from ordinary water—properties such as surface tension, viscosity, heat capacity and Gibbs free-energy. These physical anomalies also contribute to formations in the structure of snow crystals. The Flanagans' task was to create water that was identical to Hunza-type water so that they could share it with the rest of the world.

Patrick had spent 20 years trying to duplicate Hunza-type water. He tried to



These colloidal mineral clusters are arranged in a spherical pattern roughly 12 atoms in diameter.

induce anomalous properties by applying energy fields from magnets, ionising and non-ionising radiation, crystals and pyramids. He was able to duplicate a few of the anomalous properties of Hunza water, but these changes were only temporary. These altered waters lost their anomalous properties with the passage of time.

In the first year of their joint research, Patrick and Gael Crystal discovered the secret of Dr Coanda's anomalous water, and created the first laboratory analog of Hunza water. After ten years of additional research and development, they opened up a new domain in nanotechnology. They

not only duplicated the properties of Hunza water, they also increased the quantity of negatively ionised hydrogen atoms millions of times over that found in Hunza water.

They duplicated a type of colloidal mineral cluster that is only found in Hunza-type water. These mineral clusters act like tiny magnets, drawing water molecules to their surface, creating liquid crystals in the process. The electrical charge on these minerals alters the properties of water so that they reproduce the properties of Hunza water. These minerals are so tiny they are only 10 to 12 atoms in diameter.

A new emerging science, known as cluster chemistry, has shown that minerals in this size range have profound, unusual properties not found in any other form of matter.

When substance is reduced in size to this dimension, electrons travel all over the surface of the mineral instead of being confined to localised areas like electrons found on ordinary colloids. These electron clouds form a zeta potential or negative electrical charge that attracts and organises water molecules, building a liquid crystal structure.

This water intimately resembles the water found in the living system rather than water that is found in ordinary mineral or tap water. These special minerals are the source of many of the unusual water properties described by Dr Coanda. When we drink ordinary water, we have to convert it into cellular water before the cells can use it. If we cannot convert tap water into the structure of cellular water, it passes through our bodies and may leave our cells in a partially dehydrated state.

The tiny mineral clusters found in Hunza-type water, and duplicated in the Flanagans' laboratory, create liquid crystal structures that resemble those found in the living system. These tiny mineral clusters may energise practically all nutrients with which they come in contact.

Future Research on the Hydrogens

In addition to the presence of special colloidal mineral clusters, Hunza-type water contains negatively charged hydrogen ions that may be trapped in cage-like structures. It is only in the last year that the Flanagans have been able to enhance the negatively charged hydrogen ions in water by millions of times.

Everyone knows that the body needs oxygen in order to live. Recently, a lot of attention has been focused on oxygen therapies. What many do not know is that we need hydrogen as much as we need oxygen. Oxygen burns hydrogen in the living

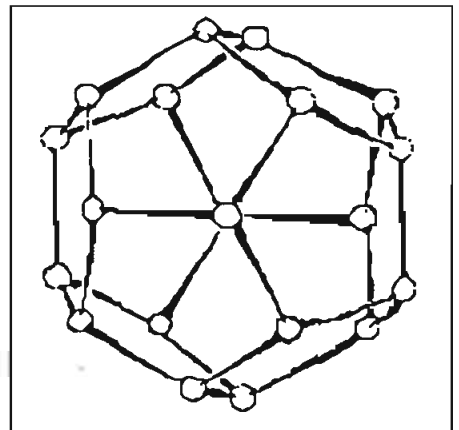
system, releasing the energy that runs our bodies.

Studies have shown that the human body stores hydrogen in its tissues. As we age, tissue hydrogen-depletion may lead to many of the symptoms of the ageing process. This may cause subclinical dehydration since it appears that hydrogen may play a role in hydrating our cells.

Symptoms of hydrogen depletion may include chronic fatigue, depression, hormone imbalances and indigestion. As our tissues are depleted of hydrogen, they become stiff and lose flexibility. Dehydrated tendons and muscles tear more easily, and dehydrated bones become brittle. Loss of lung flexibility leads to loss of oxygen. By replenishing our hydrogen stores, we may be able to relieve many of these conditions if they are brought about by hydrogen depletion.

Hydrogen makes up 90 per cent of the matter in the known Universe; helium makes up 9 per cent. All the other elements in the Universe are found in the remaining 1 per cent. Since hydrogen is so abundant, you would think that we know all there is to know about it, but we are just now learning about its importance in the living system.

The word "hydrogen" comes from the Greek language and it means "water-former". Indeed, we all know that water, the matrix or mother of life, is made up from



The figure above is an example of a molecular cage made up of 20 water molecules. This structure is formed by a phenomenon known as "hydrophobic hydration". It is a liquid crystal structure that may transport hydrogen protons and mineral clusters.

hydrogen and oxygen. In fact, water is formed when hydrogen is burned by oxygen. We create pure water every day as a product of our metabolism. When we burn hydrogen in our cells, the energy that is released is used to run our bodies.

The living system contains numerous chemical messengers that carry information and trigger events in metabolism.

New messengers are being discovered all the time. The most recently-discovered chemical messenger is nitric oxide. It is known as the fifth messenger. What very few people know is that hydrogen is the final messenger in the living system.

Albert Szent-Gyorgyi, the Nobel laureate who discovered vitamin C, found that the tissues of the animal body store hydrogen in vast quantities. Different organ tissues 'pool' hydrogen in different amounts. For example, he found that the order of hydrogen-pooling is the following:

liver > intestine > kidney > heart > lung > spleen

Liver tissues store the most hydrogen, while the spleen stores the least. This is interesting in view of the fact that the liver is the body's first line of defence and needs a supply of the most anti-oxidants in order to do its work of detoxification.

Transport of hydrogen may be the missing factor in the search for the cause of the ageing process and the secret to age reversal. As we grow older, our cells become dehydrated and our 'hydrogen pool' becomes depleted. The hydrogen pool protects our cells from free-radical damage. Virtually all longevity researchers agree that free radicals are responsible for the ageing process.

There has long been an unsolved paradox in medicine, and that is the fact that oxygen is the source of all life and is also the major cause of ageing. A tremendous effort is being extended to find a combination of powerful anti-oxidants that may control or reverse cell damage by oxidative free-radicals.

Hydrogen may be the missing half of the life equation. It is hydrogen that protects our cells from oxidative

free-radical damage and provides energy to the cells when it is burned by oxygen, which is the other half of the equation.

The single factor that is common to all anti-oxidants is that they are sources of hydrogen. Hydrogen is the ultimate anti-oxidant. Hydrogen is also the source of protons for ATP production. (Note: ATP or adenosine triphosphate is a biochemical energy battery that supplies almost all the energy needs of the human body. Our purpose of eating food is to ultimately create ATP, which could be called the 'currency of life'.)

Hydrogen is the lightest and smallest element known to science. We now know that we each use about one-half pound of pure hydrogen every day just for the production of ATP.

We have all heard of the carbon cycle in biology. The carbon cycle is the process by which plants use sunlight and water to create carbohydrates and other food stuffs. These are then used as food by animals who burn the food created by plants. Animals exhale carbon dioxide gas which is then taken up by plants. The plants then use the carbon to make more carbohydrates, proteins and lipids (fats) which then serve as animal food.

The carbon cycle could actually be renamed the 'hydrogen cycle'. Several patents have been issued lately that take advantage of the fact that plants are able to use infrared light from the sun to break down water (H₂O) into hydrogen and oxygen. The plants exhale oxygen into the atmosphere and add the hydrogen to carbon in order to make carbohydrates, proteins and lipids. Recently, scientists have succeeded in intercepting the hydrogen before it is made into food. The gas thus released can then be used to run cars!

Plants create carbohydrates, proteins and lipids by attaching hydrogen to carbon atoms like hats on a hat-rack. Carbohydrates contain an equal amount of carbon, hydrogen and oxygen. We can say that all the foods that nourish us are primary sources of hydrogen. We can see that the life cycle is really a hydrogen cycle. The 'burning of the hydrogens' is a secret of life.

Free hydrogens that are released from carbohydrates, proteins and lipids are carried into the mitochondria by a process known as the 'hydrogen shuttle' where they are used to make ATP. In this process, hydrogen is burned by oxygen, releasing energy. The final product from the burning of hydrogen is water. This extra water is eliminated from the body and is eventually taken up by plants and split by photosynthesis to make more carbohydrates, proteins and lipids.

While the above biological processes have been overly simplified in an effort to reveal the basis of the hydrogen cycle, we can see that life energy is controlled by burning hydrogen.

Albert Szent-Gyorgyi says in his book, *The Living State*: "Attaching Hydrogen to a molecule means lending energy to it. Since in Hydrogen the electron and proton are loosely coupled, by attaching an Hydrogen we essentially attach an electron."

In biological systems, hydrogen and electrons travel together in pairs. When this combination meets up with a positively charged cell-damaging free radical, the hydrogen may react with the free radical and neutralise it so that no further cell damage may occur.

It is possible that hydrogen is the ultimate anti-oxidant.

As a result of their discovery, Patrick and Gael Crystal Flanagan have been consuming large quantities of negatively charged hydrogen ions

every day. Their new transport system may make hydrogen available to the cells without first having to be attached to food. These hydrogen ions may act as free-radical scavengers, and may also be used for the production of ATP.

Since hydrogen bonds are the 'glue' that holds together the molecules in the DNA double helix, the Flanagans believe these bonds can be activated and energised. It is well known that as we age, the DNA helix coils tighter and tighter, losing flexibility. It has been hypothesised that this contraction of the DNA coil may reduce the number of times that our cells can divide. At the present time, our cells can only divide about 50 times before they cease reproduction.

If we are able to loosen the DNA helix by activating the DNA hydrogen bonds, it may have a profound effect on our ability to increase the regeneration of our cells. The DNA helix floats in water and is therefore hydrated. The tightening of the helix with ageing may be a reflection of the loss of the hydrogen pool with ageing. By restoring a plentiful supply of the hydrogen pool, these spirals may naturally unwind and regain their ability to stimulate cellular reproduction.

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**The Flanagans' research in this area of hydrogen and longevity looks very promising. If you are interested in receiving a copy of the *Flanagan Newsletter*, send a self-addressed envelope with an International Reply Postage Coupon to:
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